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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/989,426	11/21/2001	Shinichi Miyazaki	0229-0675P	9797
2292	7590	11/19/2003	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			THOMPSON, CAMIE S	
		ART UNIT	PAPER NUMBER	
		1774		

DATE MAILED: 11/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/989,426	MIYAZAKI ET AL.
	Examiner	Art Unit
	Camie S Thompson	1774

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 30 June 2003.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-20 is/are pending in the application.

4a) Of the above claim(s) 13-20 is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-6 and 8-12 is/are rejected.

7) Claim(s) 7 is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413) Paper No(s). _____.
2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) Notice of Informal Patent Application (PTO-152)
3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____. 6) Other: _____

DETAILED ACTION

1. Applicant's amendment and accompanying remarks filed June 30, 2003 have been acknowledged
2. Examiner acknowledges amended claims 1 and 2.
3. Examiner acknowledges newly added claims 3-20.

Newly submitted claims 13-20 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: Original claims 1 and 2 were directed towards a metal cord. Newly added claims are directed towards a method for producing a metal cord

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 3-20 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

4. Examiner acknowledges receipt of the foreign priority document.
5. Examiner acknowledges receipt of the form PTO-1449.
6. The rejection of claim 2 under 35 U.S.C. 112, second paragraph is withdrawn due to applicant's amended claim 2.
7. The rejection of claim 1 under 35 U.S.C. 102 (b) as being anticipated by Poque et al., U.S. Patent Number 4,328,852 is withdrawn due to applicant's amended claim 1 and argument.
8. The rejection of claims 1 and 2 under 35 U.S.C. 103(a) as being unpatentable over Poque et al., U.S. Patent Number 4,328,852 in view of Umezawa et al., U.S. Patent Number 4,488,587 is withdrawn due to applicant's argument.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1-6 and 8-12 are rejected under 35 U.S.C. 102 (b) as being anticipated by Ishizaka, U.S. Patent Number 5,706,641.

Ishizaka discloses a steel cord suitable for reinforcing a rubber article wherein 1 to 4 steel filaments form a core of the steel cord and at least 6 steel filaments are wound around the core as per instant claim 1 (see abstract and column 2, lines 9-68). The reference also discloses that the steel filament diameter is 0.15 mm to 0.25 mm as per instant claims 2, 4 and 5 (see column 2, lines 9-12). Additionally, the reference also discloses that the diameter of the core filaments can equal the diameter of the sheath filaments as per instant claims 2 and 6 (see column 2, lines 30-33). Figures 3A-3C disclose the filament as being in a two-dimensional sine wave shape as per instant claims 1, 3 and 8. The process of applying torsion to the cord does not lend any patentable weight to the cord. Even though product-by-process claims are limited and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is

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unpatentable even though the prior art was made by a different process. See MPEP 2113.

The application of torsion does not make the metal different from that of the reference.

The reference comprises a waved filament, as does the applicant. Both applicant and reference have a metal cord wherein the core comprises one filament and the sheath comprises at least filaments wrapped around the cord. Both applicant and reference have the same cord.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 1 and 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishizaka, U.S. Patent Number 5,706,641.

Ishizaka discloses a steel cord suitable for reinforcing a rubber article wherein 1 to 4 steel filaments form a core of the steel cord and at least 6 steel filaments are wound around the core as per instant claim 1 (see abstract and column 2, lines 9-68). The reference also discloses that the steel filament diameter is 0.15 mm to 0.25 mm as per instant claims 2, 4 and 5 (see column 2, lines 9-12). Additionally, the reference also discloses that the diameter of the core filaments can equal the diameter of the sheath filaments as per instant claims 2 and 6 (see column 2, lines 30-33). Figures 3A-3C disclose the filament

as being in a two-dimensional sine wave shape as per instant claims 1, 3 and 8. The reference does not disclose the wave pitch, torsion pitch or twist pitch. Both reference and applicant have a metal cord comprising a core and a sheath. Additionally, the reference core has one filament and the sheath has at least 6 filaments wound around the core, as does applicant. The reference discloses a waved filament, as does applicant. The wave pitch, wave height, torsion pitch and twist pitch affect the cord strength. However, these are optimizable features. Discovery of optimum values of result effective variables only involve routine skill in the art in re Boesch, 617 F2. 2d 272, 205 USPQ 215 (CCPA). Therefore, it would have been obvious to one of ordinary skill in the art to have the wave pitch, wave height, torsion pitch and twist pitch be within the ranges of 3.0 to 9.0 mm, 0.20 to 0.80 mm, 5.0 to 600 mm and 5.0 to 30 mm respectively in order to have a metal for reinforcing rubber that has high fatigue resistance.

13. Claim 7 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

14. Applicant's arguments filed June 30, 2003 have been fully considered but they are not persuasive. Applicant argues that the Ishizaka reference fails to disclose or suggest that the filament has a two-dimensional wave shape. Figures 3A-3C of the Ishizaka reference discloses the crest and troughs of the wave shape for the filament. The Ishizaka reference has one filament and the sheath has at least 6 filaments wound around the core,

as does applicant. Applicant argues that instant claim 1 is an appropriate product-by-process claim. Applying torsion to the cord does not make the cord a different product than that of the Ishizaka reference. The present metal cord is the same as the metal cord of the Ishizaka reference. Applicant refers to the summarized table 1 on page 11 in the present specification in order to demonstrate the enhanced rubber permeability and fatigue resistance properties. The table on page 11 of the present specification discloses the results of the metal cord with and without two-dimensional waviness, not the application of torsion. The Ishizaka reference has two-dimensional waviness, as does applicant. The rejection is maintained.

15. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Camie S. Thompson whose telephone number is (703) 305-4488. The examiner can normally be reached on Monday through Friday from 7:30 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the

examiner's supervisor, Cynthia H. Kelly, can be reached at (703) 308-0449. The fax phone number for the Group is (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661.

CYNTHIA H. KELLY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700

